(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 24 January 2002 (24.01.2002)

(51) International Patent Classification7:

PCT

(10) International Publication Number WO 02/06112 A1

43/10

SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(21) International Application Number: PCT/GR01/00039

(22) International Filing Date: 17 October 2001 (17.10.2001)

(25) Filing Language:

English

B63B 43/12,

(26) Publication Language:

English

(30) Priority Data: 20000100367

23 October 2000 (23.10.2000) GR

(71) Applicant and

(72) Inventor: PAPAGELLOU, Christos [GR/GR]; 10 Karageorgi Servias Str., GR-105 62 Athens (GR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

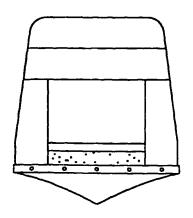
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: UNSINKABLE VESSEL



(57) Abstract: The divided in two parts (1-2) ship and the raft (3) that was added between them and made it unsinkable, has the advantage that no human lives cam be lost, nor personal belongings of the passengers and the ship itself cannot sink and it has also very low construction cost and even lower insurance cost.

WO 02/06112 A1

WO 02/06112 PCT/GR01/00039

UNSINKABLE VESSEL

The invention involves a ship and a raft, which, joined together, make the ship unsinkable.

The ships and the rafts are already known, but joined together ship-raft, not until now.

5

10

15

BUOYANCY MATERIALS

The raft can be constructed by various swelled materials, such as polystyrene, PVC, polyurethane, etc., or whatever material can hold air, compressed air or various gases and these materials can be in the form of crumbs, pieces or they can undivided and also inflammable.

COLLISION AND CRACK

In case of a collision or even in case of a crack, the buoyancy room (3) cannot be overflowed by water, because of the buoyancy material (3) that fills it, except at the exact point of the occurred damage, where a small percentage of the buoyancy material will be destroyed, which will be counted-in though, so the ship-raft will not sink.

ADVANTAGES

20 1st It does not sink, even in case of a collision or crack.

2nd There are no technical difficulties in the construction.

3rd Replacing the raft is an easy process.

4th It applies to all kinds of ships, regardless their size.

5th It functions is all weather conditions.

25

DRAWINGS

<u>Drawing 1</u> shows the side view of the ship, with its parts (1-2) divided and the raft (3) between them.

<u>Drawing 2</u> shows the back view of the ship when the raft (3) is already applied to the ship.

2

EXAMPLE

5

In order for my invention to be understandable, I will use as an example the swelled polystyrene (felizol): 1 m³ of felizol has a buoyancy of 900 almost kilos, therefore on a slab of felizol of 20m x 100m x 3m, which is 6.000 m³, we can put a burden of 5.400 tons, distributed equally all over the slab's surface and still, it will not sink. The size of the raft change, according to the size and the use of the ship.

BUOYANCY MATERIALS - ARTIFICIAL SWELLING

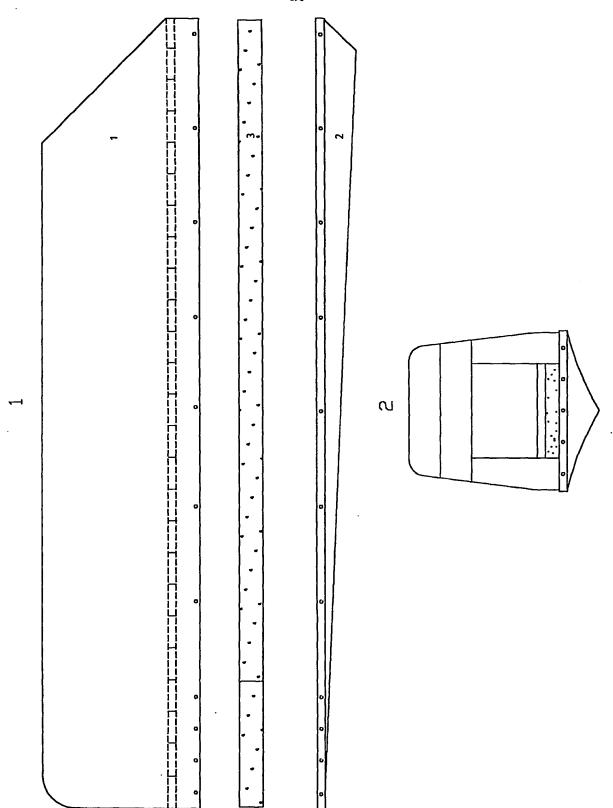
- 10 It is attained with various ways, airtight closed, such as:
 - 1.- Plastic balls filled with air, compressed air or gases, soldered together.
 - 2.- Plastic cubes, blowing of extruder.
 - 3.- Plastic cubes of injection, fifty-fifty and soldered together.
 - 4.- Plastic cubes of vacuum, fifty-fifty and soldered together.
- 15 5.- Plastic stratusesor pillows, soldered with alto-frequent.
 - 6.- Metallic ventilators, soldered.
 - 7.- Metallic wadded pipes.
 - 8.- Plastic or metallic reservoirs.
- 9.- Plastic convex tiles of extruder, air tightly soldered at the edges, with a folding such as the one of a plastic bag sides, even with inner ribs, which are super-automatically manufactured, and so, with the cheapest cost, in every dimension and length we want, by one and only production line. The material, the hardness, the shape and the dimensions will be fixed by me during the stage of the testing and the stage of measurements, when the weight per 1 m³ will also occur for the calculation of the artificial swelled lifting power.

10

15

CLAIMS

- 1.- The ship-raft is characterized by the fact that the ship is divided into two parts (1-2) and between the two parts (1-2) of the ship a raft (3) is added which has a buoyancy greater than both the weight and the cargo of the ship, this is why it is unsinkable.
- 2.- The ship-raft, according to Claim 1, is characterized by the fact that the position that the raft is fixed, does not hydro dynamically affects the ship and its functions.
 - 3.- The ship-raft, according to Claims 1 and 2, is characterized by the fact that the raft is added to every type of ship, no matter the size and the use of the ship and it also corresponds to all weather conditions.
 - **4.-** The ship-raft, according to Claims 1, 2 and 3 is characterized by the fact that the raft can be constructed by various swelled materials, such as polystyrene or PVC or polyurethane as well as by every other material which can hold air, compressed air or various gases and this material can in crumbs, pieces or undivided, even inflammable.



INTERNATIONAL SEARCH REPORT

Internation cation No PCT/GR 01/00039

CLASSIFICATION OF SUBJECT MATTER
C 7 B63B43/12 B63B B63B43/10 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 B63B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to daim No. Category ° 1 - 4χ DE 196 54 819 A (ERDMANN WOLFHARD) 25 June 1998 (1998-06-25) the whole document 1 - 3DE 41 11 013 A (ERDMANN WOLFHARD) X 8 October 1992 (1992-10-08) 4 Υ the whole document 1,3 X DE 44 36 253 A (ERDMANN WOLFHARD) 4 April 1996 (1996-04-04) 4 the whole document US 5 921 195 A (YILMAZ G GEORGE) 1,4 X 13 July 1999 (1999-07-13) column 3, line 24 -column 4, line 9; figures 4,5 Patent family members are listed in annex. Further documents are listed in the continuation of box C. X Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "A" document defining the general state of the art which is not considered to be of particular relevance "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. O' document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 12/12/2001 3 December 2001 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk
Tel. (+31–70) 340–2040, Tx. 31 651 epo nl,
Fax: (+31–70) 340–3016 Moya, E

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Internatic......plication No
PCT/GR 01/00039

		PC1/GR 01/00039		
	tion) DOCUMENTS CONSIDERED TO BE RELEVANT		Delevent to deler Mc	
Category *	Chation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.	
Υ	DE 199 07 916 A (AGNOS SCHIFFKO GMBH) 7 September 2000 (2000-09-07)		4	
Α	claims 1-10; figures		1-3	
A	DE 198 20 895 A (SEIDEL RAINER) 23 September 1999 (1999-09-23) column 2, line 67 -column 4, line 20; figures		1-4	
		'		
			·	

2

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internation PCT/GR 01/00039

			1017 411			
Patent document cited in search report		Publication date		Patent family member(s)		Publication date
DE 19654819		25-06-1998	DE	1965481	9 A1	25-06-1998
		08-10-1992	DE	411101	3 A1	08-10-1992
DE 4111013	A			443625		04-04-1996
DE 4436253	A	04-04-1996	DE 	443023		۔ سے سے نہیں سے نہے ہیں تی نے سے سے بہارہ کے اد
US 5921195	Α	13-07-1999	NONE			
DE 19907916	A	07-09-2000	DE	199079	16 A1	07-09-2000
DE 19820895	A	23-09-1999	DE AU BR CN WO EP NO PL TR DE	11043 200047	99 A 95 A 34 T 51 A2 884 A2 725 A 561 A1 705 T2	23-09-1999 18-10-1999 03-04-2001 02-05-2001 30-09-1999 06-06-2001 20-11-2000 27-08-2001 21-12-2000 08-04-1999